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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/817,122	03/27/2001	Katsutsugu Kitada	108384-00011	2234

6449 7590 07/15/2004

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EXAMINER

MEEKS, TIMOTHY HOWARD

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 07/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/817,122

Applicant(s)

KITADA ET AL.

Examiner

Timothy H Meeks

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-108 is/are pending in the application.
- 4a) Of the above claim(s) 57-108 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16, 25-32 and 41-48 is/are rejected.
- 7) ☒ Claim(s) 17-24, 33-40 and 49-56 is/are objected to.
- 8) ☒ Claim(s) 1-108 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Supplemental Non-Final Office Action

This action is supplemental to and replaces the office action mailed on 5/18/04 and is being mailed in response to applicants' letter of 6/21/04 requesting clarification of said office action. It appears that a draft of the 5/18/04 action was mailed rather than the final version. The Zorich et al. reference referred to at page 5 of said office action is USP 6,534,666. This patent is not prior art against the instant application.

Election/Restrictions

Applicant's election without traverse of claims 1-56 in Paper No. 0504 is acknowledged.

Specification

The disclosure is objected to because of the following informalities: It is noted that two sets of claims are present in the instant application. Claims 1-27 appear on pages 30-37 of the specification while another set of claims 1-108 appear on a set of pages numbered 1-27 at the end of the specification. It appears that claims 1-108 were those intended to be prosecuted. It is requested that applicants cancel pages 30-37 of the instant specification to delete the extraneous set of claims.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Moshier et al. (3,356,527).

Moshier explicitly discloses the process of claim 1 at col. 2, lines 25-55. Moshier runs hydrogen through the system which would remove oxygen.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moshier in view of Norman (5,144,049).

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Moshier is applied as above but fails to disclose distillation or sublimation for purification of the copper compound. However, because Norman discloses at col. 6 that distillation and sublimation are suitable techniques for liberating Cu (hfac) from a mixture and hence obtaining the pure copper compound, it would have been obvious to use distillation to purify the copper compound from the cold trap because doing so would have been expected to be effective for said purification.

Claims 9-12 and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moshier in view of Hawley's Condensed Chemical Dictionary.

Moshier is applied as above but fails to disclose dissolving the recovered copper compound in a solvent or recovering it from a solvent in which it is poorly soluble. However, because Hawley's discloses at page 1080 that solvent extraction involves these steps and that extraction is an effective purification method, it would have been obvious to have performed these steps to purify the recovered organometallic compound because solvent extraction is a known effective purification technique.

Claims 13, 29, 41, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moshier in view of Norman and Hawley's Condensed Chemical Dictionary.

Moshier is applied as above but fails to disclose distillation or sublimation for purification of the copper compound. However, because Norman discloses at col. 6 that distillation and sublimation are suitable techniques for liberating Cu (hfac) from a

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mixture and hence obtaining the pure copper compound, it would have been obvious to use distillation to purify the copper compound from the cold trap because doing so would have been expected to be effective for said purification.

Moshier is applied as above but fails to disclose dissolving the recovered copper compound in a solvent or recovering it from a solvent in which it is poorly soluble. However, because Hawley's discloses at page 1080 that solvent extraction involves these steps and that extraction is an effective purification method, it would have been obvious to have performed these steps to purify the recovered organometallic compound because solvent extraction is a known effective purification technique.

Claims 14-16, 30-32, 42-44, and 46-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moshier in view of Norman as applied to claims 5-8 above, and further in view of Hawley's Condensed Chemical Dictionary.

Moshier and Norman are applied as above but fail to disclose dissolving the recovered copper compound in a solvent or recovering it from a solvent in which it is poorly soluble. However, because Hawley's discloses at page 1080 that solvent extraction involves these steps and that extraction is an effective purification method, it would have been obvious to have performed these steps to purify the recovered organometallic compound because solvent extraction is a known effective purification technique.

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Allowable Subject Matter

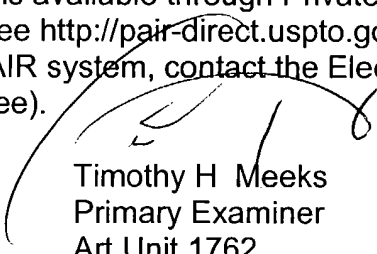
Claims 17-24, 33-40 and 49-56 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: There is no teaching or motivation to remove oxygen from a solvent used for solvent extraction of organometallic compounds recovered from an exhaust gas of a CVD process.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy H Meeks whose telephone number is 571-272-1423. The examiner can normally be reached on Mon, Wed, Thur 6-6:30, Fri 6-10.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on 571-272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Timothy H Meeks
Primary Examiner
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